

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AFFYMETRIX, INC.,

Plaintiff/Counter-Defendant,

v.

ILLUMINA, INC.,

Defendant/Counter-Plaintiff.

Civil Action No. 04-901-JJF

REDACTED VERSION

**PLAINTIFF/COUNTER-DEFENDANT AFFYMETRIX, INC.'S
REPLY TO DEFENDANT/COUNTER-PLAINTIFF
ILLUMINA, INC.'S AMENDED ANSWER AND COUNTERCLAIMS**

Plaintiff/Counter-Defendant Affymetrix, Inc. ("Affymetrix"), through its undersigned counsel, for its Reply to Defendant/Counter-Plaintiff Illumina, Inc.'s ("Illumina") Amended Answer and Counterclaims, states as follows:

REPLY TO AMENDED COUNTERCLAIMS

The Parties

1. Illumina, Inc. ("Illumina") is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 9885 Towne Centre Drive, San Diego, California 92121.

ANSWER: On information and belief, Affymetrix admits the allegations of paragraph 1.

2. On information and belief, Affymetrix, Inc. ("Affymetrix") is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 3380 Central Expressway, Santa Clara, California 95051.

ANSWER: Affymetrix admits the allegations of paragraph 2.

Jurisdiction and Venue

3. This Court has jurisdiction over the subject matter of these Counterclaims under 28 U.S.C. §§ 1331, 1367, 1338(a), 2201, and 2202.

ANSWER: Affymetrix admits that this Court has subject matter jurisdiction over Illumina's purported Counterclaims, but denies that there is any basis for such Counterclaims.

4. This Court has personal jurisdiction over Affymetrix as Affymetrix is incorporated in the State of Delaware and/or has purposely availed itself of the privilege of conducting activities within this State and District.

ANSWER: Affymetrix admits it is subject to personal jurisdiction in this judicial District.

5. Venue is proper under 28 U.S.C. §§ 1391(b), (c) and 1400(b).

ANSWER: Affymetrix admits that venue is proper in this judicial District.

Count I
Declaratory Judgment of Non-Infringement
and Invalidity and Unenforceability of US Patent No. 5,545,531

6. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

7. An actual controversy exists between Illumina and Affymetrix as to whether U.S. Patent No. 5,545,531 ("the '531 patent") is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the '531 patent is invalid and not infringed by Illumina, but denies that the '531 patent is invalid and not infringed by Illumina.

8. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the '531 patent, and whether the '531 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the '531 patent and whether the '531 patent is invalid. Affymetrix denies the remaining allegations of paragraph 8.

9. Illumina does not infringe, and has never infringed, any valid claim of the '531 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 9.

10. The '531 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 10.

11. The '531 patent is unenforceable because Affymetrix withheld material prior art from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 11.

12. More particularly, Affymetrix REDACTED
had knowledge of, *inter alia*, International Patent Application, WO 93/17126. This '126 patent application published on September 2, 1993, more than one year before the earliest filing date for the '531 patent, and is material prior art to the '531 patent.

ANSWER: Affymetrix denies the allegations of paragraph 12.

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ANSWER: Affymetrix denies the allegations of paragraph 13.

Count II
Declaratory Judgment Of Non-Infringement,
Invalidity And Unenforceability Of U.S. Patent No. 5,795,716

14. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

15. An actual controversy exists between Illumina and Affymetrix as to whether U.S. Patent No. 5,795,716 (the “‘716 patent”) is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the ‘716 patent is not infringed by Illumina, but denies that the ‘716 patent is not infringed by Illumina. Affymetrix denies the remaining allegations of paragraph 12.

16. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the ‘716 patent, and whether the ‘716 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the ‘716 patent. Affymetrix denies the remaining allegations of paragraph 16.

17. Illumina does not infringe, and has never infringed, any valid claim of the ‘716 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 17.

18. The ‘716 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 18.

19. The ‘716 patent is unenforceable because Affymetrix withheld material prior art from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 19.

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Dr. Lipshutz attended conferences at which he heard Dr.

Mirzabekov present results from experiments he was running, including a conference in November 1991 in Moscow, Russia.

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A prior art written summary of the Moscow conference was also prepared and published,

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ANSWER: Affymetrix denies the allegations of paragraph 20.

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ANSWER: Affymetrix denies the allegations of paragraph 21.

22. Dr. Mirzabekov used a computer to perform his experiments,

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In this summary, it specifically notes that Mirzabekov's presentation referred to the fact that "[p]rototype equipment for quantitative fluorescent measuring of hybridization has been constructed. It consists of a fluorescent microscope, CCD-camera, thermostatted chamber for hybridization ***and a computer with relevant programs for image analysis and sequence reconstruction operations.***"

ANSWER: Affymetrix denies the allegations of paragraph 22.

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ANSWER: Affymetrix denies the allegations of paragraph 23.

24. Dr. Lipshutz and Affymetrix withheld material prior art, *inter alia*, including the summary of the 1991 Moscow conference,

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and other publications from Dr. Mirzabekov's group from the United States Patent and Trademark Office during prosecution of the patent application that led to the '716 patent. This failure to cite material prior art to the United States Patent and Trademark Office was undertaken with an intent to deceive the Patent Office.

ANSWER: Affymetrix denies the allegations of paragraph 24.

Count III
Declaratory Judgment of Non-Infringement and
Invalidity of U.S. Patent No. 6,355,432

25. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

26. An actual controversy exists between Illumina and Affymetrix as to whether U.S. Patent No. 6,355,432 (the “‘432 patent”) is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the ‘432 patent is invalid and not infringed by Illumina, but denies that the ‘432 patent is invalid and not infringed by Illumina.

27. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the ‘432 patent, and whether the ‘432 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the ‘432 patent and whether the ‘432 patent is invalid. Affymetrix denies the remaining allegations of paragraph 27.

28. Illumina does not infringe, and has never infringed, any valid claim of the ‘432 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 28.

29. The ‘432 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 29.

30. The ‘432 patent is unenforceable because Affymetrix withheld material prior art from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 30.

31. More particularly, Affymetrix and one or more of the inventors and prosecution counsel of the ‘432 patent knew of the prior art work of Radoje Drmanac and Radomir

Crkvenjakov relating to use of encoded beads used for hybridization experiments, the subject matter of the '432 patent claims. Drs. Drmanac and Crkvenjakov presented their encoded bead invention at several conferences in the United States, starting in the fall of 1989, and published several posters and descriptions relating to this work. Upon information and belief, Dr. Fodor and/or others associated with Affymetrix (or its predecessors-in-interest, Affymax) attended these conferences at which Drs. Drmanac and Crkvenjakov presented, and learned of their prior art work through these presentations. Dr. Fodor and his co-inventors on the '432 patent did not include any written description relating to encoded beads in a patent application until after hearing Drs. Drmanac and Crkvenjakov present on this topic.

ANSWER: Affymetrix denies the allegations of paragraph 31.

32. Affymetrix and Dr. Fodor did not disclose this prior art to the United States Patent and Trademark Office or that they derived the invention claimed in the '432 patent from Drs. Drmanac and Crkvenjakov. This failure to cite material prior art to the United States Patent and Trademark Office was undertaken with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 32.

33. The '432 patent is also unenforceable because Affymetrix failed to disclose material documents arising from litigations involving similar subject matter in connection with the prosecution of the application that issued as the '432 patent. More particularly, the subject matter of the '432 patent was involved in the litigations concerning the '305, '934, and '992 patents; and therefore, the discovery, pleadings, and judicial orders arising from these litigations were material to the patentability of the '432 patent. The applicants for the '432 patent were aware that the discovery, pleadings, and judicial orders arising from the litigations involving the '305, '934, and '992 patents were material to the patentability of the '432 patent, and yet intentionally failed to disclose to the United States Patent and Trademark Office the material discovery, pleadings, and judicial orders arising from these litigations.

ANSWER: Affymetrix denies the allegations of paragraph 33.

Count IV
Declaratory Judgment of Non-Infringement
and Invalidity of U.S. Patent No. 6,399,365

34. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

35. An actual controversy exists between Illumina and Affymetrix as to whether US. Patent No. 6,399,365 (the “‘365 patent”) is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the ‘365 patent is invalid and not infringed by Illumina, but denies that the ‘365 patent is invalid and not infringed by Illumina.

36. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the ‘365 patent, and whether the ‘365 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the ‘365 patent and whether the ‘365 patent is invalid. Affymetrix denies the remaining allegations of paragraph 36.

37. Illumina does not infringe, and has never infringed, any valid claim of the ‘365 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 37.

38. The ‘365 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 38.

39. The ‘365 patent is unenforceable because Affymetrix withheld material prior art from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 39.

40. More particularly, Affymetrix and its patent counsel had knowledge of, *inter alia*, United Kingdom Patent Application GB 2129551A, which published on May 16, 1984, more than one year before the earliest filing date of the ‘365 patent and is prior art to the claims of the ‘365 patent. Specifically, the Mochida ‘551 patent was cited to Affymetrix during prosecution of United States Patent Application No. 09/585,659, in an office action dated April 6, 2001. It was specifically noted by the Patent Examiner in this April 2001 office action that the Mochida patent taught the use of bar codes in the context of microtiter plates or other biological sample holders.

ANSWER: Affymetrix denies the allegations of paragraph 40.

41. Affymetrix acknowledged its knowledge of the Mochida patent and the use of bar codes in the prior art in an Amendment of the '659 patent application dated September 17, 2001. In this Amendment, Affymetrix stated "Examiner mentions that bar codes and nucleic acids were known in the art to be encoding systems and applicants agree.

ANSWER: Affymetrix denies the allegations of paragraph 41.

42. Affymetrix and the inventors of the '365 patent did not disclose the Mochida patent to the United States Patent and Trademark Office during the prosecution that led to the '365 patent. Furthermore, the Patent Office was not informed during prosecution that Affymetrix believed "bar codes and nucleic acids were known in the art" before the earliest filing date of the '659 patent application, which predates by several years the earliest filing date of the '365 patent.

ANSWER: Affymetrix denies the allegations of paragraph 42.

43. The claims of the '365 patent were issued on January 26, 2002, after Affymetrix became aware of the Mochida patent and its relevance. In the Examiner's Statement of Reasons for Allowance of the claims of the '365 patent, he noted that "there is no prior art that teach or suggest a package for hybridization comprising an optically transparent chip comprising an array of probes comprising biological polymers immobilized on surface with a housing and a bar code." The Mochida patent expressly teaches all of these elements. The Examiner went on to explain that "[t]he closest prior art is Merkh et al (US 5,281,540) who teach a biological sample analyzer for analyzing a reaction cartridge that has a bar code but they do not teach or suggest a probe array with density exceeding 100 different biopolymers per cm² nor an optically transparent chip." The Mochida patent is closer to the claims of the '365 patent than this cited Merkh patent; indeed, the Mochida patent invalidates the '365 patent claims.

ANSWER: Affymetrix denies the allegations of paragraph 43.

44. Affymetrix and the inventors of the '365 patent withheld the Mochida patent and their knowledge of the prior art use of bar codes on microtiter plates and biological sample holders from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 44.

Count V
Declaratory Judgment of Non-Infringement and
Invalidity of U.S. Patent No. 6,607,887

45. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

46. An actual controversy exists between Illumina and Affymetrix as to whether U.S. Patent No. 6,607,887 (the “‘887 patent”) is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the ‘887 patent is not infringed by Illumina, but denies that the ‘887 patent is not infringed by Illumina. Affymetrix denies the remaining allegations of paragraph 46.

47. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the ‘887 patent, and whether the ‘887 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the ‘887 patent. Affymetrix denies the remaining allegations of paragraph 47.

48. Illumina does not infringe, and has never infringed, any valid claim of the ‘887 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 48.

49. The ‘887 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 49.

50. The ‘887 patent is unenforceable because Affymetrix failed to disclose prior art and material documents arising from litigations involving similar subject matter in connection with the prosecution of the application that issued as the ‘887 patent.

ANSWER: Affymetrix denies the allegations of paragraph 50.

51. More particularly, the subject matter of the ‘887 patent was involved in litigation concerning the ‘716 patent; and therefore, the discovery, pleadings, and judicial orders arising from such litigation were material to the patentability of the ‘887 patent.

ANSWER: Affymetrix denies the allegations of paragraph 51.

52. The applicants for the ‘887 patent were aware that the discovery, pleadings, and judicial orders arising from litigation involving the ‘716 patent were material to the patentability of the ‘887 patent, and yet intentionally failed to disclose to the United States Patent and Trademark Office the material discovery, pleadings, and judicial orders arising from such litigation.

ANSWER: Affymetrix denies the allegations of paragraph 52.

53. The applicants for the '887 patent failed to disclose to the United States Patent Office that the '716 patent was ever involved in a litigation in connection with the prosecution of the application that issued as the '887 patent.

ANSWER: Affymetrix denies the allegations of paragraph 53.

Count VI
Declaratory Judgment of Non-Infringement and
Invalidity of U.S. Patent No. 6,646,243

54. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-5 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-5 as if fully set forth herein.

55. An actual controversy exists between Illumina and Affymetrix as to whether U.S. Patent No. 6,646,243 (the “‘243 patent”) is invalid and not infringed by Illumina.

ANSWER: Affymetrix admits that an actual controversy exists between Illumina and Affymetrix as to whether the ‘243 patent is invalid and not infringed by Illumina, but denies that the ‘243 patent is invalid and not infringed by Illumina.

56. A judicial declaration is necessary and appropriate so that Illumina may ascertain its rights as to whether it infringes the ‘243 patent, and whether the ‘243 patent is invalid.

ANSWER: Affymetrix admits that a judicial declaration is appropriate as to whether Illumina infringes the ‘243 patent and whether the ‘243 patent is invalid. Affymetrix denies the remaining allegations of paragraph 56.

57. Illumina does not infringe, and has never infringed, any valid claim of the ‘243 patent either directly, contributorily, or by inducement.

ANSWER: Affymetrix denies the allegations of paragraph 57.

58. The ‘243 patent is invalid for failure to meet the requirements of the Patent Laws of the United States, including particularly one or more of the 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Affymetrix denies the allegations of paragraph 58.

59. The '243 patent is unenforceable because Affymetrix withheld material prior art from the United States Patent and Trademark Office with an intent to deceive.

ANSWER: Affymetrix denies the allegations of paragraph 59.

60. More particularly, Affymetrix and one or more of the inventors of the '243 patent had knowledge of the prior work of Radoje Drmanac and Radomir Crkvenjakov relating to use of a "sequencing chip" using a plurality of beads attached to a substrate to run hybridization experiments, the subject matter of the '243 patent claims Drs. Drmanac and Crkvenjakov presented their sequencing chip invention at several conferences in the United States, starting in the fall of 1989, and published abstracts and posters. Upon information and belief, Dr. Fodor and/or others associated with Affymetrix (or its predecessor-in-interest, Affymax) attended these conferences at which Drs. Drmanac and Crkvenjakov presented, and learned of the sequencing chip invention through these presentations. Dr. Fodor and his co-inventors on the '243 patent only included disclose relating to encoded beads in a patent application after learning of Drs. Drmanac and Crkvenjakov work in this area.

ANSWER: Affymetrix denies the allegations of paragraph 60.

61. Affymetrix and Dr. Fodor did not disclose to the United States Patent Office that they derived the invention claimed in the '243 patent from Drs. Drmanac and Crkvenjakov. This failure to cite material prior art to the United States Patent Office was undertaken with an intent to deceive the Patent Office.

ANSWER: Affymetrix denies the allegations of paragraph 61.

62. The '243 patent is unenforceable because Affymetrix also failed to disclose to the United States Patent Office material documents arising from litigations involving similar subject matter as that claimed in the '243 patent.

ANSWER: Affymetrix denies the allegations of paragraph 62.

63. More particularly, the applicants for the '243 patent failed to disclose to the United States Patent Office material documents, including discovery, pleadings, and judicial orders arising from litigation involving the '992, '934, and '305 Patents, in connection with the prosecution of the application that issued as the '243 patent.

ANSWER: Affymetrix denies the allegations of paragraph 63.

64. The subject matter of the '243 patent was involved in the litigations concerning the '305, '934, and '992 patents; and therefore, the discovery, pleadings, and judicial orders arising from these litigations were material to the patentability of the '243 patent.

ANSWER: Affymetrix denies the allegations of paragraph 64.

65. The applicants for the '243 patent were aware that the discovery, pleadings, and judicial orders arising from the litigations involving the '305, '934, and '992 patents were material to the patentability of the '243 patent, and yet intentionally failed to disclose to the United States Patent Office the material discovery, pleadings, and judicial orders arising from these litigations.

ANSWER: Affymetrix denies the allegations of paragraph 65.

66. The applicants for the '243 patent failed to disclose to the United States Patent Office that the '934 patent was ever involved in a litigation in connection with the prosecution of the application that issued as the '243 patent.

ANSWER: Affymetrix denies the allegations of paragraph 66.

Count VII
Violation of Section 2 of Sherman Act

67. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-66 as if fully set forth herein.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims.

Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix repeats and realleges its answer to paragraphs 1-66 as if fully set forth herein.

68. Affymetrix has attempted to enforce the '531, '716, '432, '365, '887, and '243 patents against Illumina in this lawsuit.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims.

Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix admits the allegations of paragraph 68.

69. Affymetrix obtained at least one of each of the '531, '716, '432, '365, '887, and '243 patents as a result of fraud committed against the United States Patent Office, as discussed in Counterclaim Counts I-VI above. The United States Patent and Trademark Office relied on the Affymetrix' inventors and agents to comply with their duty of candor, and the patents-in-suit would not have issued but for their failure to comply with this duty.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims. Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 69.

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ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims. Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 70.

71. All of these actions have helped Affymetrix attain and maintain a monopoly or near-monopoly share of the market for DNA microarray products that are sold, for example for genotyping and/or gene expression applications, in the United States and the world, Affymetrix' attempted enforcement of the patents against Illumina threatens to lessen competition and/or raise prices in the marketplace for DNA microarrays. As interpreted by Affymetrix, the patents-in-suit, individually or together, would give Affymetrix the power to exclude competition and raise prices in the DNA microarray market. Affymetrix has controlled and controls a vast majority of the DNA microarray market in the United States and the world, with a market share as high as REDACTED such that its efforts to monopolize this market have succeeded and/or are dangerously close to success.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims. Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 71.

72. Affymetrix has maintained or attempted to maintain its monopoly power by exploiting barriers to entry and by engaging in anticompetitive conduct, all with a desire to eliminate Illumina and other competitors from the marketplace. For example, Affymetrix has attempted to maintain its monopoly power through exclusionary and anticompetitive pricing practices

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Affymetrix has also attempted to

maintain its monopoly power through means such as making false and misleading statements to customers in the DNA microarray market regarding Illumina and its products or services, and through entering into exclusionary arrangements with competitors of Illumina so as to ultimately reduce competition in the DNA microarray market.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims.

Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 72.

73. Affymetrix has undertaken these actions with an intent to monopolize the DNA microarray market.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims.

Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 73.

74. Illumina and the DNA microarray market have been damaged by Affymetrix' unlawful acts. Illumina has lost many sales and sales opportunities because of Affymetrix' assertion of its unenforceable patents in this lawsuit and willful maintenance of its monopoly power through exploitation of barriers to entry and exclusionary conduct.

ANSWER: The Court has stayed Count VII of Illumina's Amended Counterclaims.

Affymetrix reserves all rights under the Federal Rules of Civil Procedure to move to dismiss this Counterclaim if and when it is allowed to go forward. Without waiving any of these rights, Affymetrix denies the allegations of paragraph 74.

Count VIII
Unfair Competition Under Cal. Bus. & Prof. Code §§ 17200 et seq.

75. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-74 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-74 as if fully set forth herein.

76. Illumina is engaged in the business of manufacturing and selling the Sentrix Array Matrix, the Sentrix BeadChip, assay reagents, and related instruments and software for researchers in the life sciences and pharmaceutical industries.

ANSWER: Affymetrix lacks knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 76, and therefore denies them.

77. Affymetrix is engaged in the business of manufacturing and selling GeneChip arrays, assay reagents, and related instruments and software for pharmaceutical, biotechnology, agrichemical, diagnostics and consumer products companies as well as academic, government and other non-profit research industries, in direct competition with Illumina.

ANSWER: Affymetrix admits that it is engaged in the business of manufacturing and selling GeneChip® arrays, assay reagents, and related instruments and software for pharmaceutical, biotechnology, agrichemical, diagnostics and consumer products companies as well as academic, government and other non-profit research industries. Affymetrix lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 77, and therefore denies them.

78. On information and belief, Affymetrix has made false and misleading statements to Illumina's customers and potential customers regarding Illumina's goods and services, including false statements that Illumina's products are inferior to Affymetrix's and will become technically obsolete in the near future. Furthermore, for the reasons discussed in Paragraph 67-74 above, Affymetrix has willfully and unlawfully maintained and/or attempted to maintain monopoly power in violation of Sec. §§ 17200 et seq.

ANSWER: Affymetrix denies the allegations of paragraph 78.

79. As a direct and proximate cause of the conduct alleged in paragraph 78, Illumina has suffered, and will continue to suffer, monetary and irreparable damages, including injury to Illumina's good will and reputation in the marketplace. Illumina has no adequate remedy at law for the irreparable damage that they have suffered and continue to suffer as a result of Affymetrix' unlawful conduct.

ANSWER: Affymetrix denies the allegations of paragraph 79.

80. Affymetrix's false and misleading statements and exclusionary conduct as alleged herein offend public policy as they are deceptive, unlawful, unfair, unscrupulous, and substantially injurious to Illumina and to its customers, and thus constitute unfair competition and unfair business practices in violation of the California Business & Professions Code §§ 17200 et seq. that prohibits unfair, unlawful and deceptive business acts.

ANSWER: Affymetrix denies the allegations of paragraph 80.

81. Under California Business & Professions Code §§ 17200, Illumina is entitled to an order enjoining Affymetrix from its making any false, misleading, defamatory, unfair or malicious statement pertaining to Illumina or its products and services and enjoining the exclusionary conduct alleged in paragraph 78 above.

ANSWER: Affymetrix denies the allegations of paragraph 81.

Count IX

Intentional Interference With Actual and Prospective Economic Advantage

82. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-81 as fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-81 as if fully set forth herein.

83. Illumina has had reasonable and valuable expectations of actual and prospective economic advantage through business relationships with both existing and potential customers.

ANSWER: Affymetrix lacks knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 83, and therefore denies them.

84. On information and belief, Affymetrix is aware of the existence of those business relationships with existing and potential customers.

ANSWER: Affymetrix denies the allegations of paragraph 84.

85. On information and belief, Affymetrix has engaged in efforts to interfere and disrupt [sic] Illumina's business relationships with existing and potential customers. REDACTED

Affymetrix has also made false and misleading statements to existing or potential customers of Illumina in an effort to interfere with Illumina's relationships with these customers.

ANSWER: Affymetrix denies the allegations of paragraph 85.

86. On information and belief, as a direct and proximate result of Affymetrix's conduct alleged herein, Illumina has been prevented from obtaining economic advantage through business relationships with existing and new customers that would have yielded substantial Illumina substantial profit [sic].

ANSWER: Affymetrix denies the allegations of paragraph 86.

87. On information and belief, Affymetrix acted knowing, willfully, and maliciously, with the intent to injure Illumina, and therefore, Illumina is entitled to recover compensatory, exemplary, and punitive damages.

ANSWER: Affymetrix denies the allegations of paragraph 87.

Count X
Unclean Hands

88. Illumina repeats and realleges the allegations in counterclaim paragraphs 1-87 as if fully set forth herein.

ANSWER: Affymetrix repeats and realleges its answer to paragraphs 1-87 as if fully set forth herein.

89. Based on Affymetrix's efforts to obtain patents through fraud, maintain these patents through the suppression of witnesses and documents that would prove the unenforceability and invalidity of these patents, and engage in deceptive dealing by, *inter alia*, obtaining Illumina confidential information, Affymetrix has unclean hands and should not, in equity, be permitted to enforce its patents against Illumina.

ANSWER: Affymetrix denies the allegations of paragraph 89.

AFFIRMATIVE DEFENSES

Affymetrix alleges and asserts the following defenses in response to the allegations of Illumina's Amended Counterclaims, undertaking the burden of proof only as to those defenses deemed affirmative defenses by law, regardless of how such defenses are denominated herein.

First Affirmative Defense
(Failure to Plead a Cause of Action)

Illumina's Counterclaims fail to state a claim upon which relief can be granted.

Second Affirmative Defense
(Laches)

Illumina's Counterclaims, and each purported cause of action therein, are barred by the equitable doctrine of laches by reason of Illumina's own actions or failures to act that have prejudiced Affymetrix.

Third Affirmative Defense
(Estoppel)

Illumina is estopped from asserting any purported causes of action against Affymetrix by reason of Illumina's own actions or failures to act.

Fourth Affirmative Defense
(Waiver)

Illumina has waived all purported causes of action and rights it seeks to assert against Affymetrix by reason of Illumina's own actions or failures to act.

Fifth Affirmative Defense
(Unclean Hands)

Illumina is barred from any recovery or relief on Counts VII, VIII, IX, and X of its Counterclaims by the doctrine of unclean hands.

Sixth Affirmative Defense
(Adequate Remedy at Law)

Any claims for injunctive relief by Illumina are barred in light of the fact that Illumina has an adequate remedy at law.

Seventh Affirmative Defense
(Conduct Not Unfair)

Affymetrix's business practices, as alleged in the Counterclaims, are not unfair within the meaning of California Business & Professions Code § 17200.

Eighth Affirmative Defense
(Conduct Not Unlawful)

Affymetrix's business practices, as alleged in the Counterclaims, are not unlawful within the meaning of California Business & Professions Code § 17200.

Ninth Affirmative Defense
(Privilege of Competition)

Illumina is barred from any recovery or relief on Counts VII, VIII, IX, and X of its Counterclaims by the privilege of competition.

Tenth Affirmative Defense
(Privilege of Free Competition)

Illumina is barred from any recovery or relief on Counts VII, VIII, IX and X of its Counterclaims by the privilege of free competition.

Eleventh Affirmative Defense
(Mootness)

Any claims for injunctive relief by Illumina are barred under the doctrine of mootness.

Twelfth Affirmative Defense
(Completed Acts)

Any claims for injunctive relief by Illumina are barred by the doctrine of completed acts.

Thirteenth Affirmative Defense
(No Immediate or Irreparable Harm)

Any claims for injunctive relief by Illumina are barred on the ground that Illumina cannot show immediate or irreparable harm.

Fourteenth Affirmative Defense
(Assignor Estoppel)

Illumina is barred from contesting the validity of the '716 and '887 patents under the doctrine of assignor estoppel.

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CERTIFICATE OF SERVICE

I hereby certify that on March 23, 2006, I electronically filed the foregoing document using CM/ECF which will send notification of such filing(s) to the following:

Richard K. Herrmann
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I also certify that copies were caused to be served on March 23, 2006 upon the following in the manner indicated:

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